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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,759	09/25/2003	Burkhard Kruper	35878	9323

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EXAMINER	
PRICE, CARL D	

ART UNIT	PAPER NUMBER
3749	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/671,759	KRUPER ET AL.	
	Examiner	Art Unit	
	CARL D. PRICE	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,8,9,12,14 and 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 4, 8, 9, 12, 14 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims **1, 3, 4, 8, 9, 12, 14** and **15** have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended the claims to be of a scope not previously considered. Consistent with applicant's argument that the prior art relied on in the previous office action fail to show, disclose and/or teach certain aspects of applicant's invention now recited in the claims filed on *, applicant has amended the claims to include the following:

> For example, claim 1 now requires "... second surface areas (2) provided on **said masses of foam ceramics**, said second surface areas being impermeable by said gaseous fuel,
> wherein **said second surface areas are formed by sealing parts of a completely permeable surface."**

With regard to the invention recited in claim 1 (currently amended) applicant argues that:

> "... neither Kahlke, JP :822, nor Cooper, nor any combination thereof teaches or suggests 'second surface areas being impermeable by said gaseous fuel, wherein said second surface areas are formed by sealing parts of a completely permeable surface,' as now required. Kahlke discloses assembling segments of different materials to provide area that are gas-permeable and other areas that are gas-impermeable (see column 3, lines 41-49). Similarly, regarding claim 12, none of the cited references teaches or suggests 'manufacturing a planar form from a heat-resistant material permeable to the fuel; and ***sealing the planar form in a given region***' as required. ... Therefore, even if the teachings of Kahlke, JP t822 and Cooper were combined, the **'sealing'** limitation of claims 1 and 12 would not be taught by the resulting combination."

The examiner however can not agree with applicant's characterization and analysis of the prior art of record. Bases on careful and thorough review of the prior art reference of **US005800156 (Kahlke),** it is noted that while **US005800156 (Kahlke)** does disclose assembling segments of different materials to provide area that are gas-permeable and other areas that are gas-impermeable (see column 3, lines 41-49). **US005800156 (Kahlke)** also discloses (column 3, lines - column 4, line 22) the following:

> (10) In all the embodiments considered thus far, the regions of different gas permeability are the result of chemical and/or physical differences in the material properties of the burner plate itself, which is monolithic or built up from a plurality of individual regions. **However,** it is also possible for the regions of different gas permeability to be formed by **a second material arranged on and/or underneath and/or in the completely or partially gas-permeable burner plate** and having a gas permeability different from that of the burner plate. The second material can be a different material, especially Al.sub.2 O.sub.3, or the same material, especially SiC with different density or porosity properties from the burner plate itself.
>
> (11) It is also possible for the **regions of different gas permeability to** be **formed by coating** them with a temperature-stable, gas-impermeable material, especially with finely particulate Al.sub.2 O.sub.3 on the top and/or bottom side of the burner plate, or to be formed by masks, covers or **glued-down** portions of reduced **or zero gas permeability,** made, in particular, of high-grade steel sheet, **which are positioned on the top and/or bottom side and/or sandwich-fashion in the burner plate.** ...
>
> (13) Accordingly to the present invention, it is possible to separate the regions of different gas permeability of the burner plate discretely and sharply from one another or to have them merge continuously into one another and thus achieve a more gentle profile of the temperature distribution. The gas radiant burners according to the invention are particularly efficient in fulfilling their tasks if the gas-permeable burner plate is **composed of porous ceramic, of ceramic, temperature-stable fibers,** especially of SiC fibers, **and/or** of **metallic fibers.** The heating surface of the burner plate is preferably composed of glass ceramic. The invention is explained in greater detail below with reference to the figures and the exemplary embodiments. ...
>
> (26) Referring to FIGS. 1a to 1d and 2a to 2c, various proposals are made for the application of a segmented burner plate. The **areas 3** are the areas which are **covered by means of a coating** and, thus, **are impermeable to the gas/air mixture.** The **areas 4** are **not coated** and, therefore, **are permeable to the gas/air mixture.** In these areas, the fiber fleece glows and emits IR radiation.

> (27) With this possibility of the **targeted covering** of different areas **without having to change the basic material** in its composition and its physical properties, **different patterns of the flowing surface** can, thus, be produced. Moreover, different temperature profiles can be produced, which can be designed so that, for example, in cooking equipment, the temperature distribution can be optimized for the bottom of the pot and, thus, a better utilization of energy can be achieved.
>
> (28) **Combinations** of **equal areas** on a burner are represented in FIGS. 2a to 2c. By the **appropriate selection of the geometries, different burner surfaces, e.g., round, oval, polygonal, etc., can be produced.** A complicated change of tools to change the forms is, thus, unnecessary.

Contrary to applicant's assertion about the absence of certain teachings in the prior art of record, **US005800156 (Kahlke)** clearly discloses and therefore meets the "**sealing**" limitation of claims 1 and 12. That is, **US005800156 (Kahlke)** expressly discloses application of second surface areas to be formed by **masks, covers** or **glued-down** portions of reduced **or zero gas permeability.** And, wherein the areas 3 of **US005800156 (Kahlke)** are the areas which are covered by means of a coating and, thus, are impermeable to the gas/air mixture. The areas 4 are not coated and, therefore, are permeable to the gas/air mixture. In these areas, the fiber fleece glows and emits IR radiation.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims: Rejected under 35 U.S.C. 103(a)

Claims **1, 3, 4, 8, 9, 12, 14** and **15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US5800156 (KAHLKE et al)** in view of **JP 08-28822** and **US4608012 (Cooper)** (of record).

US5800156 (KAHLKE et al) shows and discloses a radiant burner including:

- a burner surface (5) permeable by a gaseous fuel and on which the gaseous fuel burns, the burner surface comprising:
  - first surface areas (not referenced) provided on masses of porous or permeable ceramics (see column 3, lines 41-50 and second surface areas (not referenced) being impermeable (i.e. – "zero gas permeability") by the gaseous fuel, wherein the masses of ceramic are held in the ceramic plate. See column 3, lines 50-63 which state the following:

> (10) In all the embodiments considered thus far, the regions of different gas permeability are the result of chemical and/or physical differences in the material properties of the burner plate itself, which is monolithic or built up from a plurality of individual regions. However, it is also possible for the regions of different gas permeability to be formed by a second material arranged on and/or underneath and/or in the completely or partially gas-permeable burner plate and having a gas permeability different from that of the burner plate. The second material can be a different material, especially Al.sub.2 O.sub.3, or the same material, especially SiC with different density

> or porosity properties from the burner plate itself.
>
> (11) It is also possible for the regions of different gas permeability to be formed by coating them with a temperature-stable, gas-impermeable material, especially with finely particulate Al.sub.2 O.sub.3 on the top and/or bottom side of the burner plate, or to be formed by masks, covers or **glued-down portions of reduced or zero gas permeability,** made, in particular, of high-grade steel sheet, which are positioned on the top and/or bottom side and/or sandwich-fashion in the burner plate.

US5800156 (KAHLKE et al) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- the first permeable surface being made from ceramic foam.

JP 08-28822 teaches, form the same radiant burner field of endeavor as **US5800156 (KAHLKE et al)**, adhesively attaching permeable first surface elements (3) to a non-permeable second surface (1) in the form of a mask (figure 1), as segments below openings (14) on the second the surface or embedded within openings (12) in the second surface.

US004608012 (Cooper) teaches, form the same radiant burner field of endeavor as **US5800156 (KAHLKE et al)**, forming permeable radiant burner surfaces from ceramic foam.

In regard to claims **1, 3, 4, 8, 9, 12, 14** and **15**, for the purpose providing means for securing together the permeable and non-permeable portions it would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to embed the permeable first portions of **US5800156 (KAHLKE et al)** in openings of the second non-permeable portion, in view of the teaching of **JP 08-28822**. Also, for the purpose of providing a suitable high temperature heat resistant material for the permeable surface, it would have been obvious to a person having ordinary skill in the art to form the permeable radiant burner surfaces from ceramic foam, in view of the teaching of **US004608012 (Cooper).**

Conclusion

See the attached USPTO form 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CARL D. PRICE
Primary Examiner
Art Unit 3749

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